

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

REC'D 03 MAY 2005

WPS PCT

Applicant's or agent's file reference 0288		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/IB 02/05558	International filing date (day/month/year) 20.12.2002	Priority date (day/month/year) 20.12.2002	
International Patent Classification (IPC) or both national classification and IPC A61K35/78			
Applicant COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 7 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 20.07.2004	Date of completion of this report 02.05.2005
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**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/B 02/05558**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-10 as originally filed

Claims, Numbers

1-16 received on 21.04.2005 with letter of 18.04.2005

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-16
	No: Claims	
Inventive step (IS)	Yes: Claims	1-16
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-16
	No: Claims	

2. Citations and explanations

see separate sheet

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Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Documents

1.1. The present application refers to herbal soft drinks comprising 1.) **two or more plant extracts selected** from *Sida* spp., *Vitis vinifera*, *Withania somnifera*, *Boerhaavia diffusa* and *Tinospora cordifolia*, 2.) jaggery, 3.) a fermenting agent and 4.) carbonated water.

1.2. The following prior art documents cited in the International Search Report have been considered to be particularly relevant:

D1: US2002/025349A1

D2: WO9805346

D3: GB2314270

1.3. Reference is made to the passages cited in the International Search Report.

2. Novelty

2.1. Document D1 discloses liquid orals comprising ayurvedic herbal ingredients obtained from a mixture of different plants along with jaggery and a fermenting agent (*Woodfordia fruticosa*, see example 1). A fermentation process is defined as a process brought by a fermenting agent upon sugar to produce alcohol and carbon dioxide. Thus, the resulting herbal drink comprises herbal extracts, jaggery, a fermenting agent and carbonated water (carbon dioxide resulting from the fermenting process).

It is noted that the 'herbal soft' drink according to present claim 1 comprises jaggery and a fermenting agent. Thus, it has to be presumed that the fermenting agent (such as *saccharomyces* strain) acts upon the jaggery to produce a limited amount of self generated alcohol.

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However, D1 does not disclose a mixture of herbs selected from *Withania somnifera*, *Vitis vinifera*, *Boerhaavia diffusa*, *Sida sps* and *Tinospora cordifolia*.

- 2.2. D2 discloses beverages comprising *Withania somnifera* and *Tinospora cordifolia*. Suitable beverages in which the herbal formulation can be incorporated within include soft drinks.

The subject-matter of present claim 1 relates to a soft drink **comprising** herbal extracts. The expression 'comprising' means that more than the claimed extracts may be included.

Claim 1 refers to a soft drink comprising a mixture of herbs selected from a list of 5 different plants. However, a soft drink comprising only two plant extracts such as *Withania somnifera* and *Tinospora cordifolia* is also included in present claim 1.

Thus, document D2 **only differs** from present claim 1 in the use of specific additional ingredients such as jaggery and a fermenting agent.

- 2.3. Document D3 teaches an anti-AIDS ayurvedic medicine comprising aqueous extracts of *Withania somnifera*, *Vitis vinifera*, *Boerhaavia diffusa* and *Tinospora cordifolia*. However, the aqueous composition does not represent a herbal soft drink.
- 2.4. None of the prior art documents discloses a composition according to the present claim 1. Consequently, claims 1-8 and 9-16 referring to the preparation of the herbal soft drink fulfill the criteria of Art. 33(2) PCT since the subject-matter of the claims is novel.

3. Inventive step

- 3.1. Claims 1-16 are considered to involve an inventive step for the following reasons:
- 3.2. Document D2, which is considered to represent the most relevant state of the art, discloses a herbal soft drink comprising a mixture of herbs selected from *Withania somnifera* and *Tinospora cordifolia*. However, no special processing requirements are mentioned. Thus, it can be presumed that the herbal composition is incorporated in

the soft drink in a conventional method containing conventional ingredients. Hence, the soft drink probably contains the herbal composition, water, sugar, coloring agent, flavoring agent and may be further mixed with carbonated water.

The herbal composition is used for reducing/alleviating symptoms associated with arthritis and to **delay natural or induced aging of an individual**.

- 3.3. The subject-matter of claims 1-16 differs from D1 in that a soft drink with jaggery and fermenting agents is provided.
- 3.3. The problem to be solved by the present invention may therefore be regarded as 'provision of further healthy soft drinks comprising the ayurvedic plants *Withania somnifera* and *Tinospora cordifolia*'.
- 3.4. The solution proposed in the present claims is seen in the use of the special w/w ratio of carbonated water: the mixture of the concentrated extract, jaggery and the fermenting agent (such as *Saccharomyces* strain or flowers of *Woodfordia fruticosa*) in the range of 1:3 to 1:5. Thus, a purely herbal soft drink **without chemical preservatives or colorants** is provided. The specific combination of the ingredients results in a product which is highly rejuvenating and good for health and which can be taken instead of any soft drink.
- 3.5. Document D2 discloses oral liquid herbal compositions comprising jaggery as base for fermentation and fermenting agents such as *Woodfordia fruticosa* or *Saccharomyces* strains (paragraph 0075).
- 3.6. Being aware of the problem and looking for a solution to the present problem, a person skilled in the art could have combined the jaggery and fermenting agents disclosed in D2 with the herbals *Withania somnifera* and *Tinospora cordifolia* of the soft drink provided by document D1 but he would not have necessarily done so. Moreover, he would not have found any incentive to chose the specific ratios according to the present application.
Although document D1 already points towards an antioxidative effect (delay of aging), it does not mention hepatoprotective, cardi tonic, diuretic, digestive, choleric, nervine relaxant and immuno-enhancing properties.

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- 3.7. The subject-matter of claim 1-16 does therefore involve an inventive step (Article 33(3) PCT).